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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/692,965

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Barry A. O'Mahony

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EXAMINER

NGUYEN, THUAN T

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

05/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/692,965	Applicant(s) O'MAHONY, BARRY A.	
	Examiner THUAN T. NGUYEN	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 16-21 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 16-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Remark

1. Claims 9-15 and 22-30 have been cancelled, and claims 1-8 and 16-21 are pending for reconsideration.

Response to Arguments

2. Applicant's arguments with respect to claims 1-8 and 16-21 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-8 and 16-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Kerper (U.S. Patent No. 7,106,833 B2) in view of Otten et al. (US Patent No. 5,511,233).

Regarding claim 1, Kerper teaches a method to determine whether if a device emits electromagnetic interference (EMI) in one or more regions of an electromagnetic spectrum occupied by other users, i.e., as shown in Figs. 1 & 3, EMI is identified within the network and a database for storing parameters which needs to evaluate and automatically fixing/adjusting EMI

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problems by assign or reshuffle the different transmit powers of each device and by optimizing its spectra for optimization efficiency (refer to col. 3/lines 30-49 & col. 4/lines 20-65).

Kerper might not suggest the step of "if yes, reducing the EMI in one or more regions and increasing the EMI in one or more other regions of the electromagnetic spectrum that are unoccupied by other users"; however, this technique is taught by Otten as Otten teaches either to reduce or increase the EMI based on occupied or unoccupied by other users in other areas as Otten describes therein:

(6) As used herein, an "interference zone" refers to a geographic region surrounding a system operating in the electromagnetic spectrum within which harmful interference would be encountered. Should the transmission by a second system interfere with the reception of a first system, the second system would be considered to be operating in the interference zone of the first system. Should the receiver of a second system receive harmful interference from the transmission of a first system, the second system would also be considered to be operating in the interference zone of the first system.

(7) In a system that provides both transmission and reception, there are thus two interference zones and these two interference zones may differ. A "transmit interference zone" is a minimal geographical region about the fixed system's radio communication receiver system defined for a particular frequency band where transmission by a mobile transmitter system on that frequency band in that geographical region could cause harmful interference to the fixed system's receiver system. A "receive interference zone" is a minimal geographical region about a fixed system's radio communication transmitting system defined for a particular frequency band where a mobile receiver system in that frequency band within that geographical region could receive harmful interference from the fixed system's transmitting system. The interference zone is specified by frequency bands and by three dimensions of geography.

Otten manages to control the interference zones by performing as following:

(22) If the mobile user's position is known then the regional network control center 12 calculates the correct non-interference frequency subbands for the mobile user and the space node or ground node as the case may be 56. If the mobile user's position is not known then the call request is received by the network controller via the satellite or ground node and the return transmission to the mobile user is made via the subband known to be clear of interference for all of that particular satellite cell or ground node cell.

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(23) With the call now in progress, the mobile user's exact location is determined by the network controller using the receptions from two or more satellites 58 or ground nodes as described in U.S. Pat. No. 5,073,900 (Mallinckrodt) or by other means.

(24) In one embodiment, the network controller now uses the determined user's position combined with the stored data base of interference zone maps from the known locations of all the fixed microwave service installations to calculate 60 which frequency subbands are available on a mutual non-interference basis for both the uplink and the downlink for this mobile user 60. Final selection of commanded frequencies to the satellite (or ground) transmitter and the mobile user's transmitter will also take into consideration existing traffic loads on each subband and other current network usage parameters.

Therefore, it would have been obvious to one of ordinary skill in the art to modify Kerper's technique with Otten's teaching technique of controlling the reducing and increasing of EMI depending on interference zones occupied or unoccupied by other users in order to better control the electromagnetic interference within an enclosure or outside through coordination by licensing and geographic (location or area) or frequency selection as disclosed by Hightower.

As for claims 2-3, Kerper teaches these feature as the algorithm calculates whether to reduce, remove or increase EMI in one or more regions (refer to col. 5/lines 4-32 & Fig. 7 and col. 9/line 27 to col. 10/line 24).

As for claim 4, this is inherently suggested as Kerper uses the term "subscriber" which referred to the licensed users (Fig. 1, and col. 5/line 59 to col. 6/line 20). In addition, Hightower teaches the requirement for obtaining licensing by FCC (col. 1/line 18 to col. 2/line 22).

As for claims 5-8, these features refer to the steps of checking whether a user is a licensed user and the determination of the location of the licensed users by accessing the database for information (Fig. 1 again for the database, col. 5/lines 4-32; col. 9/line 27 to col. 10/line 24 for algorithm on joint optimality and spectral compatibility; and col. 16/lines 31-59 for algorithm to determine the spectral density of subscribers).

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As for claims 16-21, these claims, with same features as addressed earlier in claims 1-8, are rejected for the reason given in the scope of claims 1-8 as disclosed above. For claim 16, Kerper might not suggest the step of “reducing the EMI in one or more regions and increasing the EMI in one or more other regions of the electromagnetic spectrum that are unoccupied by other users” (refer to claim 1 above for the teaching of Kerper and Otten as discussed).

Conclusion

5. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to the New Central Fax number:

(571) 273-8300, (for Technology Center 2600 only)

Hand deliveries must be made to Customer Service Window,

Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (571) 272-7895.

The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tony T. Nguyen/
Primary Examiner
Art Unit 2618

TTN
May 06, 2008